



April 15, 2005  
Project A77-01

Mr. Dane Mathis  
Regional Water Quality Control Board  
Central Valley Region  
Fresno Branch Office  
1685 "E" Street  
Fresno, CA 93706-2020

**Re: Results of April, 2005 Quarterly Groundwater Monitoring and Air Quality Monitoring, Art's Mercantile, Fresno, California, Case #5T10000148, Claim #1733**

Dear Mr. Mathis:

HerSchy Environmental is pleased to present the results of the most recent quarterly groundwater monitoring event for the above-referenced property along with results of the last quarter of monitoring and operation of the soil vapor extraction system (SVES). The site is located at 2082 West Whites Bridge Road, which is on the northeast corner of West Whites Bridge Road and Hughes Avenue in Fresno, Fresno County, California (Figure 1).

#### **PREVIOUS WORK**

Three underground storage tanks (USTs) were removed from the site in November, 1988. During the UST removal, samples retrieved by Twinning Laboratories, Inc. determined that contamination was found beneath two of the three USTs. In December, 1989 SSB Environmental Consultants, Inc. drilled two initial soil borings to determine the extent of pollutants. Results of this investigation lead to additional borings and the installation of six monitoring wells in 1994. The monitoring wells were sampled through 1998 at which time additional work was performed which included the installation of four vapor extraction wells. An initial soil vapor extraction test (VET) was performed in December, 1998. A corrective action plan was submitted by Raley & Associates in April, 1999 which included a detailed history of work performed up to that date and proposed the installation of a soil vapor extraction system (SVES). Grisanti and Associates took over remediation at the site in September, 2001; an electric catalytic oxidizer was installed soon after and groundwater monitoring continued. The thermal oxidizer, installed and operated by Grisanti and Associates, was removed prior to March 2003, during this same month Herschy Environmental, Inc. took over remediation efforts.



An additional VET was necessary to acquire data needed to evaluate remaining pollutants and further remediation. The VET was performed by HerSchy Environmental, Inc. in September, 2003, results are presented in the November 17, 2003 correspondence, *"Results of the September, 2003 Vapor Extraction Test and the October, 2003 Quarterly Monitoring..."* A replacement thermal oxidizer was installed as was proposed in the January 29, 2004 correspondence, *"Corrective Action Plan, Art's Mercantile, Fresno, California, Case #5T10000148, Claim #1733"* prepared by Herschy Environmental. Installation and startup of the SVES was delayed due to complications with the power supply, details of the initial operation of the SVES can be found in the July 30, 2004 correspondence, *"Air Quality Startup Inspection Results for Art's Mercantile, Fresno, Fresno County, California, Permit No. C-4338-1-0"* prepared by HerSchy Environmental Inc.

## **METHODS OF INVESTIGATION-Groundwater Monitoring**

### Groundwater Sampling Procedures

Six monitoring wells were purged and sampled using the Waterra pumping system on March 30, 2005 (MW-1 through MW-6). Prior to initiating groundwater sampling, the monitoring wells were measured for static water level and total depth using an electric sounder. Depth to groundwater was recorded to the nearest 0.01 feet on field sampling data sheets. The groundwater elevations in the monitoring wells were calculated by subtracting the measured depth to groundwater from the surveyed well elevation. The depth to groundwater, total depth of the well, and well diameter were used to calculate the purge volume for each respective well.

Over three casing volumes were purged from each monitoring well prior to sampling. Physical characteristics (temperature, pH, electrical conductivity, and turbidity) were recorded on the sampling data sheets during the initial stages of purging and again prior to sampling. Samples were collected in paired 40-milliliter bottles fitted with Teflon-lined septa. The bottles were filled completely to form a positive meniscus and checked after capping to ensure that no air bubbles were present in the sampling vial.

Groundwater samples were placed in a cooler chest with frozen gel packs ("blue ice") immediately after sampling. Samples were stored, transported, and delivered under chain-of-custody documentation. Groundwater field sampling data sheets are presented in Appendix A.

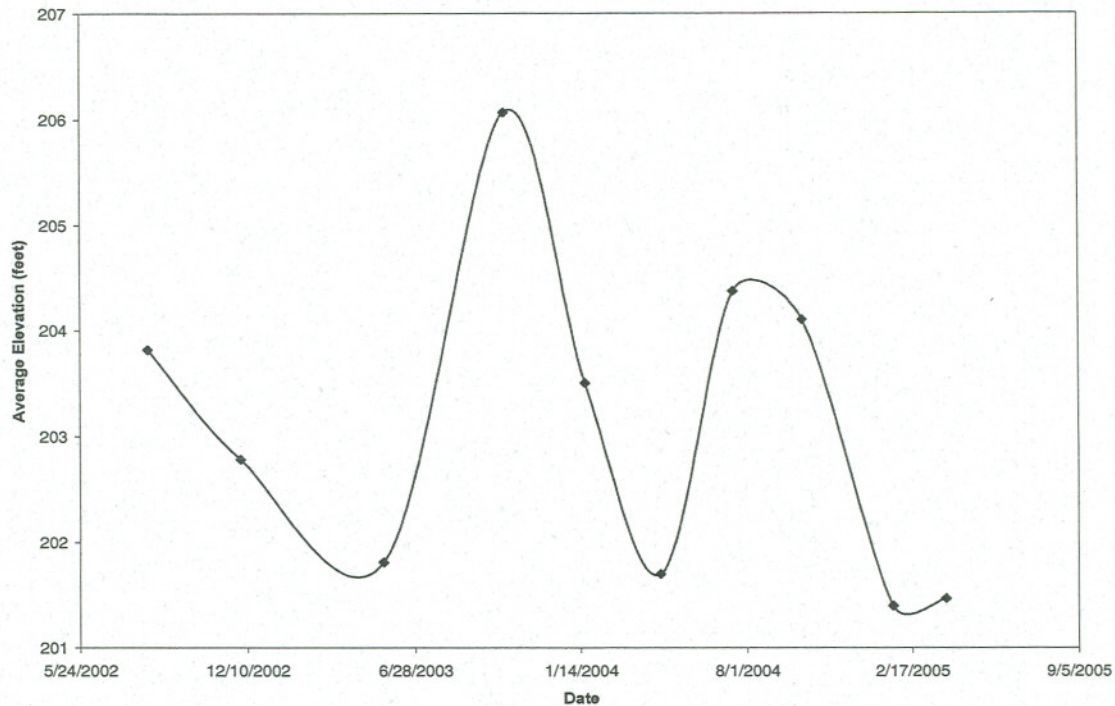
## **RESULTS OF INVESTIGATION-Groundwater Analysis**

### Groundwater Conditions

Plate 1 below shows graphical representation of the average groundwater elevation over the past two years of monitoring. These data show seasonal fluctuations opposite of seasonal precipitation. A possible explanation for this is the presence of a nearby canal that contains more water during the summer months and recharges the local water table.



**Plate 1**  
**Average Groundwater Elevations**  
**August, 2002 through January, 2005**



First encountered groundwater is currently at an average depth of 75.60 feet or an average elevation of 201.47 feet. This is an increase of 0.07 feet from the January, 2005 event. Groundwater flow direction is north 23° east, with a gradient of 0.00005. Groundwater conditions over the last year of monitoring are summarized in Table 1 below, groundwater conditions during the most recent monitoring event are presented graphically in Figure 1.

**Table 1**  
**Groundwater Conditions, Art's Mercantile, Fresno**

Well No.	Elevation	Depth to GW	GW Elevation
<b>July 16, 2004:</b>			
MW-1	277.01	72.67	204.34
MW-2	277.52	73.03	204.49
MW-3	277.17	72.69	204.48
MW-4	276.80	72.15	204.65
MW-5	277.37	73.19	204.18
MW-6	276.52	72.41	204.11

Flow Direction =N. 5 E.; Gradient = .086



**Table 1 (continued)**  
**Groundwater Conditions, Art's Mercantile, Fresno**

Well No.	Elevation	Depth to GW	GW Elevation
<b>October 7, 2004:</b>			
MW-1	277.01	72.92	204.09
MW-2	277.52	73.30	204.22
MW-3	277.17	72.90	204.27
MW-4	276.80	72.50	204.30
MW-5	277.37	73.47	203.90
MW-6	276.52	72.68	203.84
Flow Direction = N. 9 W.; Gradient = .0015			
<b>January 25, 2005:</b>			
MW-1	277.01	75.60	201.41
MW-2	277.52	76.11	201.41
MW-3	277.17	75.71	201.46
MW-4	276.80	75.41	201.39
MW-5	277.37	76.05	201.32
MW-6	276.52	--	--
Flow Direction = N. 25 E.; Gradient = .00076			
<b>March 30, 2005:</b>			
MW-1	277.01	75.53	201.48
MW-2	277.52	76.02	201.50
MW-3	277.17	75.65	201.52
MW-4	276.80	75.32	201.48
MW-5	277.37	75.96	201.41
MW-6	276.52	75.10	201.42
Flow Direction = N. 23 E.; Gradient = .00005			

Elevations in feet

#### Laboratory Analytical Results

Groundwater samples were submitted to a California certified laboratory and analyzed for gasoline-range total petroleum hydrocarbons (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tertiary butyl ether (MTBE). Analysis was performed using EPA method 8015M for TPHg and EPA method 8020 for BTEX and MTBE. Samples were prepared using EPA method 5030. Laboratory analytical results are summarized in Table 2. Certified analytical reports and chain-of-custody documentation are presented in Appendix B.

**Table 2**  
**Laboratory Analytical Results, Art's Mercantile, Fresno**

Well No.	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
<b>July 16, 2004:</b>						
MW-1	ND	ND	ND	ND	ND	ND
MW-2	ND	ND	ND	ND	ND	ND
MW-3	ND	ND	ND	ND	ND	ND



**Table 2 (continued)**  
**Laboratory Analytical Results, Art's Mercantile, Fresno**

Well No.	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
MW-4	ND	ND	ND	ND	ND	ND
MW-5	ND	ND	ND	ND	ND	ND
MW-6	ND	ND	ND	ND	ND	ND
<b>October 7, 2004:</b>						
MW-1	ND	ND	ND	ND	ND	ND
MW-2	ND	ND	ND	ND	ND	ND
MW-3	ND	ND	ND	ND	ND	ND
MW-4	ND	ND	ND	ND	ND	ND
MW-5	ND	ND	ND	ND	ND	ND
MW-6	ND	ND	ND	ND	ND	ND
<b>January 25, 2005:</b>						
MW-1	ND	ND	ND	ND	ND	ND
MW-2	ND	ND	ND	ND	ND	ND
MW-3	ND	ND	ND	ND	ND	ND
MW-4	ND	ND	ND	ND	ND	ND
MW-5	ND	ND	ND	ND	ND	ND
MW-6	NA	NA	NA	NA	NA	NA
<b>March 30, 2005:</b>						
MW-1	ND	ND	ND	ND	ND	ND
MW-2	ND	ND	ND	ND	ND	ND
MW-3	ND	ND	ND	ND	ND	ND
MW-4	ND	ND	ND	ND	ND	ND
MW-5	ND	ND	ND	ND	ND	ND
MW-6	ND	ND	ND	ND	ND	ND

All results presented in parts per billion (ppb)

\* MTBE results by EPA method 8260

ND= below detectable concentrations

There were no detectable concentrations of gasoline constituents in any of the wells sampled on March 30, 2005. None of the analytes have been detected in groundwater samples for the past seven consecutive quarters.

#### **METHODS OF INVESTIGATION – Air Quality Monitoring**

The soil vapor extraction system (SVES) at this site was determined to no longer be necessary in the March 15, 2005 correspondence from the regional water quality control board, *"Report Review and Comment, Art's Mercantile, 2082 Whites Bridge Road, Fresno, Fresno County"*. The unit was shut down and removed on Friday, April 1, 2005 by Frontier Environmental Services, Inc.

#### Monitoring Procedures

The soil vapor extraction system (SVES) at this site employed a Frontier Environmental Services, Inc. electric/catalytic thermal oxidizer for air abatement. The



SVES was started up in late June, 2004, utilizing a California Air Resources Board (CARB) certified portable diesel generator to supply electricity for the system. Electrical service was established by the middle of August and the generator was removed from the site on September 8, 2004.

Air monitoring is conducted using a photo-ionization detector (PID) to measure volatile organic compound (VOC) concentrations at the influent and effluent lines of the SVES and a portable hot-wire air flow meter to measure the air flow through the SVES. In accordance with the permit to operate issued by the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) the SVES was monitored on a monthly basis. In addition, vapor samples are collected from the influent vapor sampling port at each monthly monitoring event. These samples are collected by connecting a vacuum pump to the influent vapor sampling port and pumping the sample in a tedlar bag. The tedlar bag is then sealed and placed in a cooler chest for protection from sunlight.

Vapor samples are submitted to a California-certified laboratory for analysis. Samples are prepared by EPA method 5030, and analyzed for TPHg and BTEX by EPA method 8015M and for MTBE by EPA method 8020. Vapor samples are analyzed by a laboratory certified in these methodologies. Vapor samples were collected, transported, and delivered under chain-of-custody documentation.

## **RESULTS OF INVESTIGATION – Air Quality Analysis**

Parts per million by volume (ppmv) of VOCs, as TPHg, can be converted to micrograms per liter ( $\mu\text{g/L}$ ) by multiplying by 5.1 based on the molecular weight of TPHg. One liter is equal to 0.03531 cubic feet. To calculate VOCs in pounds per liter (lbs/L), the formula is as follows:

$$(\mu\text{g/L})(2.2 \text{ lbs}/1000000000 \mu\text{g}) = \text{lbs/L VOCs}$$

Converting lbs/L to lbs/day:

$$(\text{lbs/L})(1 \text{ l}/0.03531 \text{ ft}^3)(\text{ft}^3/\text{m})(60 \text{ min}/\text{hr})(8 \text{ hr}) = \text{lbs}/8\text{-hour day VOCs}$$

Since January, 2005 the SVES operated at an average air flow of approximately 41 cubic feet per minute (cfm) and removed over 42 pounds of VOCs from the soil. By this method we estimate the SVES has removed over 591 pounds of VOCs from the soil since start-up in July, 2004. Given that one gallon of product weighs 6.17 pounds, approximately 96 gallons of product have been removed as soil vapor since July 12, 2004. This estimate is based on laboratory results rather than field readings.

Table 3 summarizes the results of our monthly air monitoring events for the duration of operation of this unit based on laboratory results for TPHg. Air monitoring field data sheets for the most recent quarter of monitoring are presented in Appendix C.



**Table 3**  
**Air Quality Monitoring Results for Art's Mercantile**

Date	Hours of Operation	Influent VOC	Effluent VOC	Air Flow	Destruction Efficiency	Effluent Release (lbs/day)	VOCs Removed (lbs/day)	VOCs Removed (lbs)
7/12/2004	447.30	91 <sup>^</sup>	21	71	76.92%	0.69	2.96	55.10
8/11/2004	422.00	73 <sup>^</sup>	0	100	100.00%	0.00	3.34	58.73
9/2/2004	448.80	200 <sup>^</sup>	5.1*	142	97.45%	0.33	12.99	243.01
10/18/2004	1104.80	63	3.7*	105	94.13%	0.18	3.03	139.33
11/2/2004	355.90	24	0*	73	100.00%	0.00	0.80	11.89
12/8/2004	360.20	19	0	27.15	100.00%	0.00	0.24	3.54
1/19/2005	1008.50 <sup>+</sup>	30	32	65	-6.67%	0.96	0.89	37.49
2/16/2005	2041.30	0	0	30.2	100.00%	0.00	0.00	0.00
3/21/2005	2832.70	15	37	52.5	-146.67%	0.89	0.36	42.53
Total VOCs removed							591.63	
Equivalent Gallons of Gasoline							96	

VOC concentrations in parts per million by volume (ppmv)

Air flow in cubic feet per minute (cfm)

<sup>^</sup> From laboratory results presented October 22, 2004

\* Readings were taken by PID in the field; all other influent/effluent concentrations are from lab results

<sup>+</sup> Calculated from last date and time based on 100% operation

Table 4 below summarizes the laboratory analytical results from monthly influent vapor samples. Laboratory analytical results and chain-of-custody documentation for the latest two months of monitoring are presented in Appendix D; all other results have been previously reported.

**Table 4**  
**Influent VOC Concentrations**

Date	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
7/12/2004 <sup>^</sup>	467	ND	11	7.2	70	ND
8/11/2004 <sup>^</sup>	380	ND	2.6	4.8	49	ND
9/2/2004 <sup>^</sup>	1000	ND	ND	7.7	88	ND
10/18/2004	260	ND	1.2	1.9	19	ND
11/2/2004	96	0.84	6.0	2.1	13	ND
12/8/2004	80	ND	0.78	ND	4.5	ND
1/19/2005	120	ND	ND	0.66	6.8	ND
2/16/2005	ND	ND	ND	ND	ND	ND
3/21/2005	15	ND	ND	ND	0.61	ND

Concentrations are presented in µg/L

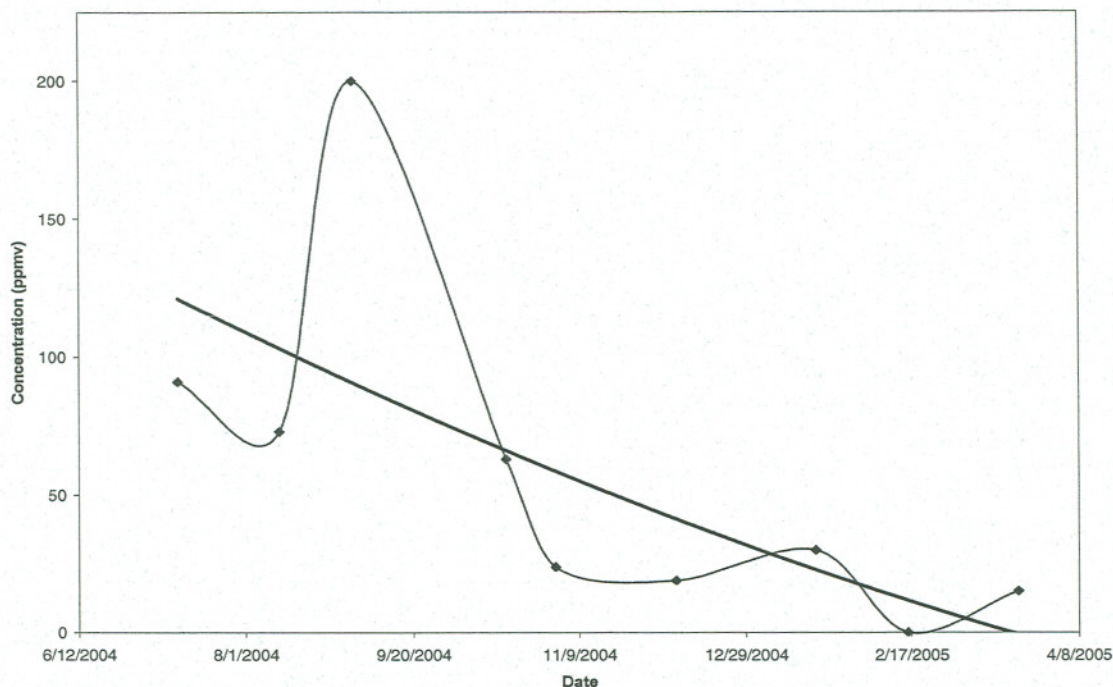
<sup>^</sup> Laboratory results presented October 22, 2004

ND indicates contaminant is below detection limit



Influent TPHg results are presented graphically in Plate 2, along with an estimate of the trend in influent concentrations.

**Plate 2**  
**Influent TPHg Concentrations**  
**July, 2004 through March, 2005**



Influent concentrations have dropped to levels averaging 8 ppmv over the last two months. This concentration is down from an average of 34 ppmv reported for the last quarter on monitoring

## CONCLUSIONS AND RECOMMENDATIONS

No gasoline constituents have been detected in groundwater for seven consecutive quarters. Concentrations in soil vapor have decreased to levels below those needed to maintain suitable destruction efficiency for an electric/catalytic thermal oxidizer; therefore, the unit has been shut down and removed. HerSchy Environmental, Inc. recommends that this site be evaluated for closure and no further remediation be done at this time.

To verify that closure is appropriate for this site, HerSchy Environmental, Inc. recommends that a demonstrational boring (B-7) be drilled and soil be sampled. The soil boring should be located near vapor extraction well, EX-2, since that well was determined to be near the center of the contamination according to the most recent vapor extraction test. The proposed location of the boring is presented in Figure 1.



### Method of Investigation

Drilling will be performed using a truck-mounted drill rig equipped with eight-inch hollow stem augers. Augers will be steam cleaned prior to arriving on site. Contaminated soil in EX-2 was detected at a depth of 55 feet BGS during the time of instillation in November 1998. Therefore it is proposed that the demonstration boring be completed to a depth of 55 feet.

Soil samples will be collected using a California modified split-spoon sampler equipped with brass or stainless steel liners. The samples will be collected at five-foot intervals beginning at a depth of 5 feet. The boring will be drilled to a depth of 55 feet. The split-spoon sampler will be cleaned between sampling events.

Soil samples will be field screened using a portable organic vapor analyzer (OVA). A portion of the sample retrieved from each sampling interval will be placed in a plastic zip-lock bag, sealed in a bag for a minimum of five minutes at 70 degrees Fahrenheit or more, and the OVA probe inserted into the bag to evaluate concentrations of volatile organic compounds (VOCs) in soil. Samples indicating the presence of fuel constituents at concentrations greater than 50 ppm, based on field screening, will be sent to a certified laboratory for analysis. Regardless of OVA results, samples at a rate of at least one sample for every ten feet of drilling and the two deepest samples from the boring will also be submitted to the laboratory for analysis.

Soil samples will be placed in a cooler chest with frozen gel packs ("blue ice"), and maintained at or below four degrees Celsius until delivered to the laboratory. Samples will be transported and transferred under chain-of-custody documentation. Soil samples and drill cuttings will be described in accordance with the Unified Soil Classification System by a geologist working under the direction of a California Registered Geologist. Upon completion of drilling, the boring will be backfilled with sand-cement slurry. Drill cuttings will be stored on site in 55-gallon DOT approved drums. Upon receipt of laboratory analytical results, a proper disposal method for contained drill cuttings will be determined.

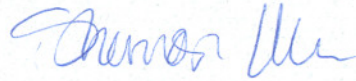
### Laboratory Analysis

Soil samples will be analyzed for gasoline-range total petroleum hydrocarbons (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tertiary butyl ether (MTBE). Laboratory analysis will be performed using EPA method 8015M for TPHg, EPA method 8020 for BTEX and MTBE. Samples will also be analyzed for MTBE, tertiary amyl methyl ether (TAME), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary butyl alcohol (TBA), 1,2-dichloroethane (1,2-DCA), and ethylene dibromide (EDB) using EPA method 8260, and lead using EPA methods 6010.

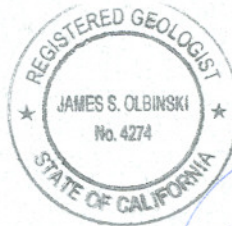


If you have any questions or require additional information, please contact us at the letterhead address or at (559) 641-7320.

With best regards,  
HerSchy Environmental, Inc.



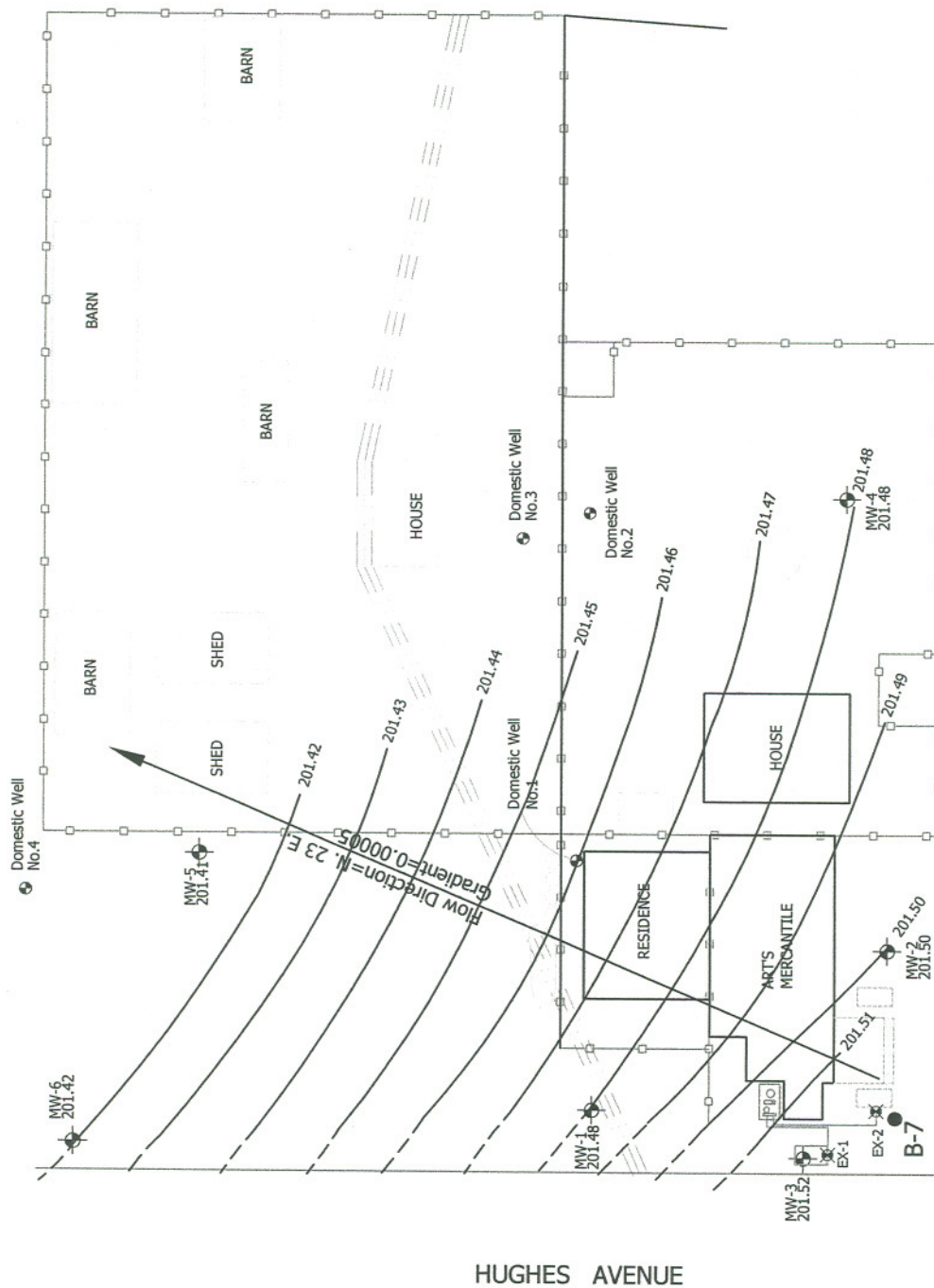
Shannon Lodge  
Geologist



James S. Olbinski  
Registered Geologist #4274

pc: Mr. Art Kanzaki, Art's Mercantile  
Mr. Jim Armstrong, Fresno County Environmental Health System





*HerSchy Environmental, Inc.*  
Environmental Consulting and Remediation

P. O. Box 229  
Bass Lake, California 93604-0229  
Tel. (559) 641-7320, Fax (559) 641-7340

MARCH 2005 GROUNDWATER CONDITIONS  
AND PROPOSED DEMONSTRATION BORING  
Art's Mercantile

2082 W. Whites Bridge Road, Fresno, California

DATE:  
April, 2005  
FILE NO.:  
A77-01.02  
DRAWN BY:  
JSO

FIGURE  
1



## APPENDIX A

### GROUNDWATER SAMPLING FIELD DATA SHEETS



**HerSchy Environmental** **WATER SAMPLE FIELD DATA SHEET**

Client Name: Art's Mercantile Location: Fresno

Purged By: Gurule Sampled by: Gurule

Sample ID: MW-1 Type: Groundwater ☒ Surface Water ☐ Other ☐

Casing Diameter (inches): 2 ☒ 3 ☐ 4 ☐ 5 ☐ 6 ☐ Other ☐

Casing Elevation (feet/MSL): \_\_\_\_\_ Volume in Casing (gal.): 1.27

Depth of Well (feet): 83.30 Calculate Purge Volume (gal.): 3.82

Depth to Water (feet): 75.53 Actual Purge Volume (gal.): 4.0

Date Purged: 3/30/05 Date Sampled: 3/30/05 1400

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
<u>1352</u>	<u>—</u>	<u>7.22</u>	<u>487</u>	<u>73.8</u>	<u>Murky</u>
<u>1356</u>	<u>4.0</u>	<u>7.15</u>	<u>478</u>	<u>72.0</u>	<u>"</u>

Other Observations: \_\_\_\_\_ Odor: None

Purging Equipment: Waterco

Sampling Equipment: "

Remarks: \_\_\_\_\_

Sampler's Signature: [Signature]



HerSchy **WATER SAMPLE FIELD DATA SHEET**  
Environmental

Client Name: Art's Mercantile Location: Freshu

Purged By: Gurule Sampled by: Gurule

Sample ID: MW-2 Type: Groundwater ☒ Surface Water ☐ Other ☐

Casing Diameter (inches): 2 ☒ 3 ☐ 4 ☐ 5 ☐ 6 ☐ Other ☐

Casing Elevation (feet/MSL): \_\_\_\_\_ Volume in Casing (gal.): 1.16

Depth of Well (feet): 83.07 Calculate Purge Volume (gal.): 3.47

Depth to Water (feet): 76.02 Actual Purge Volume (gal.): 4.0

Date Purged: 3/30/05 Date Sampled: 3/30/05 1435

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
<u>1427</u>	<u>—</u>	<u>7.28</u>	<u>637</u>	<u>73.3</u>	<u>Mr K.</u>
<u>1432</u>	<u>3.5</u>	<u>7.17</u>	<u>636</u>	<u>72.2</u>	<u>Cloudy</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Other Observations: \_\_\_\_\_ Odor: None

Purging Equipment: Waterro

Sampling Equipment: "

Remarks: \_\_\_\_\_

Sampler's Signature: Jeff Gurule



HerSchy **WATER SAMPLE FIELD DATA SHEET**  
Environmental

Client Name: Arts Mercantile Location: Fresno

Purged By: Gurule Sampled by: Gurule

Sample ID: MW-3 Type: Groundwater ☒ Surface Water ☐ Other ☐

Casing Diameter (inches): 2 ☒ 3 ☐ 4 ☐ 5 ☐ 6 ☐ Other ☐

Casing Elevation (feet/MSL): \_\_\_\_\_ Volume in Casing (gal.): 1.06

Depth of Well (feet): 82.10 Calculate Purge Volume (gal.): 3.17

Depth to Water (feet): 75.65 Actual Purge Volume (gal.): 0

Date Purged: 3/30/05 Date Sampled: 3/30/05 1424

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
<u>1411</u>	<u>—</u>	<u>7.29</u>	<u>533</u>	<u>74.7</u>	<u>Murky</u>
<u>1415</u>	<u>4.0</u>	<u>7.39</u>	<u>440</u>	<u>72.5</u>	<u>Clear</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Other Observations: \_\_\_\_\_ Odor: None

Purging Equipment: Waterira

Sampling Equipment: uv

Remarks: \_\_\_\_\_

Sampler's Signature: Jeff Gurule



HerSchy **WATER SAMPLE FIELD DATA SHEET**  
Environmental

Client Name: Arts Mercantile Location: Fresno

Purged By: Gurule Sampled by: Gurule

Sample ID: MW-41 Type: Groundwater ☒ Surface Water ☐ Other ☐

Casing Diameter (inches): 2 ☒ 3 ☐ 4 ☐ 5 ☐ 6 ☐ Other ☐

Casing Elevation (feet/MSL): \_\_\_\_\_ Volume in Casing (gal.): 1.59

Depth of Well (feet): 85.01 Calculate Purge Volume (gal.): 4.77

Depth to Water (feet): 75.32 Actual Purge Volume (gal.): 5.0

Date Purged: 3/30/05 Date Sampled: 3/30/05 1455

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
<u>1446</u>	<u>—</u>	<u>7.28</u>	<u>619</u>	<u>73.2</u>	<u>Murky</u>
<u>1453</u>	<u>5.0</u>	<u>7.23</u>	<u>592</u>	<u>71.6</u>	<u>Cloudy</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Other Observations: \_\_\_\_\_ Odor: None

Purging Equipment: Waterra

Sampling Equipment: V

Remarks: \_\_\_\_\_

Sampler's Signature: Jeff Gurule



HerSchy **WATER SAMPLE FIELD DATA SHEET**  
Environmental

Client Name: Arts Mercantile Location: Fresno

Purged By: Gurule Sampled by: Gurule

Sample ID: MW-5 Type: Groundwater ☒ Surface Water ☐ Other ☐

Casing Diameter (inches): 2 ☒ 3 ☐ 4 ☐ 5 ☐ 6 ☐ Other ☐

Casing Elevation (feet/MSL): \_\_\_\_\_ Volume in Casing (gal.): 1.01

Depth of Well (feet): 82.14 Calculate Purge Volume (gal.): 3.04

Depth to Water (feet): 75.96 Actual Purge Volume (gal.): 3.5

Date Purged: 3/30/05 Date Sampled: 3/30/05 1340

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
<u>1335</u>	<u>—</u>	<u>7.05</u>	<u>651</u>	<u>74.4</u>	<u>Clear</u>
<u>1339</u>	<u>3+</u>	<u>6.91</u>	<u>623</u>	<u>72.5</u>	<u>"</u>

Other Observations: \_\_\_\_\_ Odor: None

Purging Equipment: Watera

Sampling Equipment: il

Remarks: \_\_\_\_\_

Sampler's Signature: [Signature]



HerSchy **WATER SAMPLE FIELD DATA SHEET**  
Environmental

Client Name: Arts Mercantile Location: Fresno

Purged By: Gurne Sampled by: Gurne

Sample ID: MW-6 Type: Groundwater ☒ Surface Water ☐ Other ☐

Casing Diameter (inches): 2 ☒ 3 ☐ 4 ☐ 5 ☐ 6 ☐ Other ☐

Casing Elevation (feet/MSL): \_\_\_\_\_ Volume in Casing (gal.): 1.81

Depth of Well (feet): 86.11 Calculate Purge Volume (gal.): 5.42

Depth to Water (feet): 75.10 Actual Purge Volume (gal.): 6.0

Date Purged: 3/30/05 Date Sampled: 3/30/05 1315

TIME	VOLUME	pH	E. C.	TEMP.	TURBIDITY
<u>1300</u>	<u>—</u>	<u>7.32</u>	<u>769</u>	<u>75.5</u>	<u>Murky</u>
<u>1314</u>	<u>6.0</u>	<u>7.15</u>	<u>689</u>	<u>72.7</u>	<u>Clear</u>

Other Observations: \_\_\_\_\_ Odor: None

Purging Equipment: Water

Sampling Equipment: "

Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Sampler's Signature: Jeff Gurne



APPENDIX B

GROUNDWATER MONITORING  
CERTIFIED ANALYTICAL RESULTS AND  
CHAIN-OF-CUSTODY DOCUMENTATION



## CASTLE ANALYTICAL LABORATORY

Environmental Testing Services  
Certificate #2480

2333 Shuttle Drive, Atwater, CA 95301

Phone: (209) 384-2930  
Fax: (209) 384-1507HerSchy Environmental  
P.O. Box 229  
Bass Lake, CA 93604  
Attn: Shannon LodgeClient Project ID: Art's Mercantile - Fresno  
Reference Number: 7961  
Sample Description: Water  
Sample Prep/Analysis Method: EPA 5030/8015M, 8020  
Lab Numbers: 7961-1W, 2W, 3W, 4W, 5WSampled: 03-30-05  
Received: 03-30-05  
Extracted: 04-01-05  
Analyzed: 04-01-05  
Reported: 04-08-05TOTAL PETROLEUM HYDROCARBONS - GASOLINE  
WITH BTEX DISTINCTION

ANALYTE	REPORTING LIMIT	SAMPLE ID MW-1 (µg/L)	SAMPLE ID MW-2 (µg/L)	SAMPLE ID MW-3 (µg/L)	SAMPLE ID MW-4 (µg/L)	SAMPLE ID MW-5 (µg/L)
	µg/L					
MTBE	0.50	ND	ND	ND	ND	ND
BENZENE	0.50	ND	ND	ND	ND	ND
TOLUENE	0.50	ND	ND	ND	ND	ND
ETHYLBENZENE	0.50	ND	ND	ND	ND	ND
TOTAL XYLENES	0.50	ND	ND	ND	ND	ND
GASOLINE RANGE HYDROCARBONS	50	ND	ND	ND	ND	ND
Report Limit Multiplication Factor:		1	1	1	1	1

Surrogate % Recovery:

FID: 99.9% / PID: 101% FID: 97.8% / PID: 99.5% FID: 99.9% / PID: 99.8% FID: 99.9% / PID: 99.9% FID: 101% / PID: 102%

Instrument ID:

VAR-GC1

VAR-GC1

VAR-GC1

VAR-GC1

VAR-GC1

Analytes reported as ND were not detected or below the Practical Quantitation Limit  
Practical Quantitation Limit = Reporting Limit x Report Limit Multiplication Factor

ANALYST:

Clari J. Cone

APPROVED BY:

James C. Phillips  
Laboratory Director



## CASTLE ANALYTICAL LABORATORY

Environmental Testing Services  
Certificate #2480

2333 Shuttle Drive, Atwater, CA 95301

Phone: (209) 384-2930

Fax: (209) 384-1507

HerSchy Environmental  
P.O. Box 229  
Bass Lake, CA 93604  
Attn: Shannon LodgeClient Project ID: Art's Mercantile - Fresno  
Reference Number: 7961  
Sample Description: Water  
Sample Prep/Analysis Method: EPA 5030/8015M, 8020  
Lab Numbers: 7961-6WSampled: 03-30-05  
Received: 03-30-05  
Extracted: 04-01-05  
Analyzed: 04-01-05  
Reported: 04-08-05TOTAL PETROLEUM HYDROCARBONS - GASOLINE  
WITH BTEX DISTINCTION

ANALYTE	REPORTING LIMIT	SAMPLE ID
	$\mu\text{g/L}$	MW-6 ( $\mu\text{g/L}$ )
MTBE	0.50	ND
BENZENE	0.50	ND
TOLUENE	0.50	ND
ETHYLBENZENE	0.50	ND
TOTAL XYLENES	0.50	ND
GASOLINE RANGE HYDROCARBONS	50	ND

Report Limit Multiplication Factor:

1

Surrogate % Recovery:

FID: 105% / PID: 107%

Instrument ID:

VAR-GC1

Analytes reported as ND were not detected or below the Practical Quantitation Limit  
Practical Quantitation Limit = Reporting Limit x Report Limit Multiplication Factor

ANALYST:

Clari J. Cone

APPROVED BY:

James C. Phillips  
Laboratory Director

## CHAIN OF CUSTODY

Certificate No. 2480

PAGE OF

Phone: (209) 384-2930 - Fax: (209) 384-1507

[illegible]



## APPENDIX C

### AIR QUALITY MONITORING FIELD DATA SHEETS

HerSchy  
Environmental

AIR MONITORING FIELD DATA SHEET

Client/Project Number: ART'S MERCANTILE A 77-01

Location: FRESNO

Date: 2-16-05 Time: 1215 Sampler: JOE NELSON

Type of Monitoring/Sampling: AIR

Monitoring/Sampling Equipment: PID, TS 1

Complete Form as Appropriate. Indicate Where Not Applicable:

Number of samples/sampling locations: 2 BAG SAMPLES @ INFLUENT & EFFLUENT

Hours of Operation: 2041.3 Percent Operating: 100%

Inflow Concentration: 51.9 ppm Exhaust Concentration: 4 ppm

Other Samples/Sampling Locations: AIR FLOW INFLUENT = 30.2

Comments/Observations:



HerSchy  
Environmental

AIR MONITORING FIELD DATA SHEET

Client/Project Number: ART'S MERCANTILE A77-01

Location: FRESNO

Date: 3-21-05 Time: 11:11 Sampler: JOE NELSON

Type of Monitoring/Sampling: AIR

Monitoring/Sampling Equipment: PID, TS 1, VAC PUMP

Complete Form as Appropriate. Indicate Where Not Applicable:

Number of samples/sampling locations: 2 INFLUENT, EFFLUENT

Hours of Operation: 2832.7 Percent Operating: 100%

Inflow Concentration: 20.1 ppm Exhaust Concentration: 2.8 ppm

Other Samples/Sampling Locations: AIR FLOW INFLUENT 52.5 CFM

Comments/Observations: USED VAC PUMP TO TAKE BAC SAMPLE -  
TURNUED OFF OXIDIZER TO DRAW FROM INFLUENT

## APPENDIX D

### AIR QUALITY MONITORING CERTIFIED ANALYTICAL RESULTS AND CHAIN-OF-CUSTODY DOCUMENTATION



# CASTLE ANALYTICAL LABORATORY

Environmental Testing Services  
Certificate # 2480

2333 Shuttle Drive, Atwater, CA 95301

(209) 384-2930  
(209) 384-1507

HerSchy Environmental  
P.O. Box 229  
Bass Lake, CA 93604  
Attn: Shannon Lodge

Client Project ID: Art's Mercantile - Fresno  
Reference Number: 7820  
Sample Description: Air  
Sample Prep/Analysis Method: 5030/8015M, 8020  
Lab Number: 7820-1V  
Sample ID: Influent

Sampled: 02-16-05  
Received: 02-16-05  
Analyzed: 02-17-05  
Reported: 02-23-05

## TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE WITH BTEX DISTINCTION

ANALYTE	PQL* (ug/L)	PQL* (ppmv)	AMOUNT (ug/L)	AMOUNT (ppmv)
MTBE	0.50	0.14	ND	ND
BENZENE	0.50	0.16	ND	ND
TOLUENE	0.50	0.13	ND	ND
ETHYL BENZENE	0.50	0.11	ND	ND
TOTAL XYLENES	0.50	0.11	ND	ND
GASOLINE RANGE HYDROCARBONS	50	9.7	ND	ND
Dilution Factor:	1			

Instrument ID:

VAR-GC1

\*PQL - Practical Quantitation Limit

Analytes reported as ND were not detected or below the Practical Quantitation Limit

APPROVED BY:

*Clari J. Cone*  
Clari J. Cone

Laboratory Manager

APPROVED BY:

*James C. Phillips*  
James C. Phillips

Laboratory Director

COPY

# CASTLE ANALYTICAL LABORATORY

Environmental Testing Services  
Certificate # 2480

2333 Shuttle Drive, Atwater, CA 95301

(209) 384-2930  
(209) 384-1507

HerSchy Environmental  
P.O. Box 229  
Bass Lake, CA 93604  
Attn: Shannon Lodge

Client Project ID: Art's Mercantile - Fresno  
Reference Number: 7820  
Sample Description: Air  
Sample Prep/Analysis Method: 5030/8015M, 8020  
Lab Number: 7820-2V  
Sample ID: Effluent

Sampled: 02-16-05  
Received: 02-16-05  
Analyzed: 02-17-05  
Reported: 02-23-05

## TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE WITH BTEX DISTINCTION

ANALYTE	PQL* (ug/L)	PQL* (ppmv)	AMOUNT (ug/L)	AMOUNT (ppmv)
MTBE	0.50	0.14	ND	ND
BENZENE	0.50	0.16	ND	ND
TOLUENE	0.50	0.13	ND	ND
ETHYL BENZENE	0.50	0.11	ND	ND
TOTAL XYLENES	0.50	0.11	ND	ND
GASOLINE RANGE HYDROCARBONS	50	9.7	ND	ND
Dilution Factor:	1			

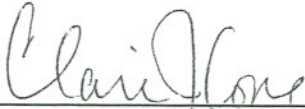
Instrument ID:

VAR-GC1


\*PQL - Practical Quantitation Limit

Analytes reported as ND were not detected or below the Practical Quantitation Limit

APPROVED BY:

  
Clari J. Cone  
Laboratory Manager

APPROVED BY:

  
James C. Phillips  
Laboratory Director



Phone: (209) 384-2930 - Fax: (209) 384-1507

Certificate No. 2480

PAGE 1 OF 1

[illegible]

# CASTLE ANALYTICAL LABORATORY

Environmental Testing Services  
Certificate # 2480

2333 Shuttle Drive, Atwater, CA 95301

(209) 384-2930  
(209) 384-1507

HerSchy Environmental  
P.O. Box 229  
Bass Lake, CA 93604  
Attn: Shannon Lodge

Client Project ID: Art's Mercantile  
Reference Number: 7928  
Sample Description: Air  
Sample Prep/Analysis Method: 5030/8015M, 8020  
Lab Number: 7928-1V  
Sample ID: Influent

Sampled: 03-21-05  
Received: 03-21-05  
Analyzed: 03-23-05  
Reported: 03-25-05

## TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE WITH BTEX DISTINCTION

ANALYTE	PQL* (ug/L)	PQL* (ppmv)	AMOUNT (ug/L)	AMOUNT (ppmv)
MTBE	0.50	0.14	ND	ND
BENZENE	0.50	0.16	ND	ND
TOLUENE	0.50	0.13	ND	ND
ETHYL BENZENE	0.50	0.11	ND	ND
TOTAL XYLENES	0.50	0.11	2.6	0.61
GASOLINE RANGE HYDROCARBONS	50	9.7	62	15
Dilution Factor:	1			

Instrument ID:

VAR-GC1


\*PQL - Practical Quantitation Limit

Analytes reported as ND were not detected or below the Practical Quantitation Limit

APPROVED BY:

  
Clari J. Cone  
Laboratory Manager

APPROVED BY:

  
James C. Phillips  
Laboratory Director



# CASTLE ANALYTICAL LABORATORY

Environmental Testing Services  
Certificate # 2480

2333 Shuttle Drive, Atwater, CA 95301

(209) 384-2930  
(209) 384-1507

HerSchy Environmental  
P.O. Box 229  
Bass Lake, CA 93604  
Attn: Shannon Lodge

Client Project ID: Art's Mercantile  
Reference Number: 7928  
Sample Description: Air  
Sample Prep/Analysis Method: 5030/8015M, 8020  
Lab Number: 7928-2V  
Sample ID: Effluent

Sampled: 03-21-05  
Received: 03-21-05  
Analyzed: 03-23-05  
Reported: 03-25-05

## TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE WITH BTEX DISTINCTION

ANALYTE	PQL* (ug/L)	PQL* (ppmv)	AMOUNT (ug/L)	AMOUNT (ppmv)
MTBE	0.50	0.14	ND	ND
BENZENE	0.50	0.16	ND	ND
TOLUENE	0.50	0.13	0.91	0.24
ETHYL BENZENE	0.50	0.11	0.53	0.12
TOTAL XYLENES	0.50	0.11	3.9	0.90
GASOLINE RANGE HYDROCARBONS	50	9.7	150	37
Dilution Factor:	1			


Instrument ID:

VAR-GC1


\*PQL - Practical Quantitation Limit

Analytes reported as ND were not detected or below the Practical Quantitation Limit

APPROVED BY:

  
Clari J. Cone  
Laboratory Manager

APPROVED BY:

  
James C. Phillips  
Laboratory Director

## CHAIN OF CUSTODY

Certificate No. 2480

PAGE 1 OF 1

Phone: (209) 384-2930 - Fax: (209) 384-1507

[illegible]